

Comment
By the Members
Of the Intelligent Transportation Systems Program Advisory Committee (ITSPAC)
On FCC Notice of Proposed Rulemaking FC 13-22
To Permit Unlicensed National Information Infrastructure Devices
In the 5 GHz Band
May 28, 2013

These comments are submitted by the Members of the Intelligent Transportation Systems Program Advisory Committee (ITSPAC), a Federal Advisory Committee appointed by the US Secretary of Transportation as directed by Section 5305(h) of the SAFETEA-LU P.L. 109-59 Legislation. ITSPAC members are experts in the fields of transportation (state and local, road, transit, and freight), automobile manufacturing, automotive electronics, mobile communications, public policy, Internet, engineering research, and vehicle safety.

The ITSPAC submits these comments to the Federal Communications Commission (FCC) in response to the current proposal for a revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band.

The ITSPAC notes that the 5.850 – 5.925 GHz (DSRC) section of this band is essential for the very promising technology of vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communications safety systems currently in development and test by the US DOT and by private industry, including the major automobile manufacturers. With its low latency, the first deployment of this technology for V2V makes possible fast and highly reliable data transmission between moving vehicles. This revolutionary development, fostered by the DOT, promises extraordinary benefits to improve traffic safety. This anticipated reduction in accidents, with its associated reduction in costs and productivity losses, would allow society to redirect resources to productive, job-creating investments.

The ITSPAC respects the plans of the FCC to use data-driven review testing to assess potential interference. We urge the agency to execute a thorough examination through this testing. One of our fears is that a sufficiently powerful or improperly designed transmitting source, especially from unlicensed devices, may interfere with the mainstream DSRC V2V communications at some point. Due to the multiple access scheme deployed for 802.11 devices, even a well-designed interfering radio that started transmitting data earlier in time would likely delay the delivery of a DSRC V2V safety message. The presence of multiple interfering radios would even further delay DSRC V2V safety messages to the point of making them unusable for preventing imminent crash events.

This is one of the most important reasons why the FCC originally decided to dedicate this spectrum to vehicle communications in the first place: to ensure that the system could perform with very high reliability, robustness, and low latency under all conditions, unhampered by in-band interference. It is undesirable to have even a single piece of critical information mis-detected and/or delayed due to unexpected interference.

We acknowledge the value of spectrum as more consumer services move to wireless delivery, and in particular we acknowledge the value of using Wi-Fi to extend the reach of wireless services delivery. However, this must be weighed against any adverse impact such use could have on what could be the biggest contributor to improve traffic safety in the history of the automobile. We now have in our hands a technology and solution nearly ready for full-scale deployment that could change forever our expectations on automobile safety. The U.S., moreover, is the current world leader in this deployment and stands to gain many jobs as a result. Given the potential adverse effects of shared spectrum use on V2V imminent crash avoidance, we urge that no change be made unless thorough data-driven review testing demonstrates that no harmful interference would occur to the existing frequency allocation.

The ITSPAC looks forward to a day in the not-too-distant future when the citizens of the U.S. experience improved traffic safety for themselves and their children. We will likely find adequate spectrum for wireless services outside that which is currently specifically allocated for V2x safety, and none of us will regret this strategic investment of spectrum for the safety of the American public.

Sincerely,

The Members of the Intelligent Transportation Systems Program Advisory Committee
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